AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-136. (Cancelled).

137. (Currently Amended) An optical pickup apparatus for recording and/or reproducing information for an optical information medium, comprising:

a first light source configured to emit a first light flux having a first wavelength for recording and/or reproducing a second information recording medium provided with a transparent substrate;

a second light source configured to emit a second light flux having a second wavelength longer than the first wavelength, for recording and/or reproducing ~~the~~ a first information recording medium provided with a transparent substrate;

a third light source configured to emit a third light flux having a third wavelength longer than the second wavelength, for recording and/or reproducing ~~the~~ a third information recording medium provided with a transparent substrate having a thickness thicker than that of each of the first and second information recording mediums; and

an objective lens configured to converge the first, second, and third light fluxes onto the second, first, and third optical information recording mediums respectively, the objective lens comprising an aspherical refractive surface and a ring-shaped diffractive portion;

wherein when recording and/or reproducing information is conducted for the second information recording medium, the first light flux emitted from the first light

source enters the objective lens as a parallel light flux and is converged on the second information recording medium,

when recording and/or reproducing information is conducted for the first information recording medium, the second light flux emitted from the second light source enters the objective lens as a parallel light flux and is converged on the first information recording medium, ~~and~~

when recording and/or reproducing information is conducted for the third information recording medium, the third light flux emitted from the third light source enters the objective lens as a parallel light flux and is converged on the third information recording medium, and

wherein the aspherical refractive surface and the ring-shaped diffractive portion correct spherical aberrations due to difference in wavelength among the first, second, and third light fluxes and spherical aberration due to difference in thickness of the transparent substrate among the first, second, and third optical information medium.

138. (Previously presented) The optical pickup apparatus of claim 137, wherein the first light flux having the first wavelength is a blue laser beam.

139. (Previously presented) The optical pickup apparatus of claim 137, wherein the second optical information recording medium is a next-generation high density optical disk which information is recorded on and/or reproduced from with the blue laser beam.

140. (Previously Presented) The optical pickup apparatus of claim 137, wherein the thickness of the transparent substrate of the first optical information recording medium is equal to that of the second information recording medium.

141. (Previously Presented) The optical pickup apparatus of claim 137, wherein when NA2 is an image side numerical aperture of the objective lens necessary for recording and/or reproducing information for the first optical information medium, NA1 is an image side numerical aperture of the objective lens necessary for recording and/or reproducing information for the second optical information medium, and NA3 is an image side numerical aperture of the objective lens necessary for recording and/or reproducing information for the third optical information medium, NA1 and NA2 are larger than NA3.

142. (Previously Presented) The optical pickup apparatus of claim 141, wherein NA1 is equal to NA2.

143. (Previously Presented) The optical pickup apparatus of claim 141, wherein when recording and/or reproducing information is conducted for the third optical information recording medium, a spherical aberration of a light flux having passed through a region of the objective lens having a numerical aperture larger than NA3 is flare on the third optical information recording medium.

144-146. (Cancelled).

147. (Previously presented) The optical pickup apparatus of claim 143, wherein the ring-shaped diffractive surface is designed by a phase difference function in which a coefficient of the second power term is not zero and a coefficient of a term other than the second power term is not zero.

148. (Currently Amended) ~~The optical pickup apparatus of claim 137,~~ An optical pickup apparatus for recording and/or reproducing information for an optical information medium, comprising:

a first light source configured to emit a first light flux having a first wavelength for recording and/or reproducing a second information recording medium provided with a transparent substrate;

a second light source configured to emit a second light flux having a second wavelength longer than the first wavelength, for recording and/or reproducing a first information recording medium provided with a transparent substrate;

a third light source configured to emit a third light flux having a third wavelength longer than the second wavelength, for recording and/or reproducing a third information recording medium provided with a transparent substrate having a thickness thicker than that of each of the first and second information recording mediums; and

an objective lens configured to converge the first, second, and third light fluxes onto the second, first, and third optical information recording mediums respectively,

wherein when recording and/or reproducing information is conducted for the second information recording medium, the first light flux emitted from the first light source enters the objective lens as a parallel light flux and is converged on the second information recording medium,

when recording and/or reproducing information is conducted for the first information recording medium, the second light flux emitted from the second light source enters the objective lens as a parallel light flux and is converged on the first information recording medium, and

when recording and/or reproducing information is conducted for the third information recording medium, the third light flux emitted from the third light source

enters the objective lens as a parallel light flux and is converged on the third information recording medium, and

wherein spherical aberrations due to different wavelength among the first, second and third light fluxes are corrected by a combination of a refractive power and a diffractive power of the objective lens.

149. (Previously Presented) The optical pickup apparatus of claim 137, further comprising a collimator to make a light flux from a light source to a parallel light flux to entrance into the objective lens.

150. (Previously Presented) The optical pickup apparatus of claim 137, wherein the objective lens is a single lens.

151. (New) The optical pickup apparatus of claim 137, wherein the objective lens comprises a first area including an optical axis of the objective lens and a second area outside of the first area on an optical surface of the objective lens, the ring-shaped diffractive portion being provided at least on the first area of the objective lens, and

wherein in case that the first light flux passes through the ring-shaped diffractive portion on the first area to generate at least one diffractive ray, an amount of n-th ordered diffracted ray of the first light flux is greater than that of any other ordered diffracted ray of the first light flux, in case that the second light flux passes through the ring-shaped diffractive portion on the first area to generate at least one diffracted ray, an amount of n-th ordered diffracted ray of the second light flux is greater than that of any other ordered diffracted ray of the second light flux, and in case that the third light flux passes through the ring-shaped diffractive portion on the first area to generate at least

one diffracted ray, an amount of n-th ordered diffractive ray of the first light flux is greater than that of any other ordered diffracted ray of the third light flux,

wherein n is an integer other than zero.

152. (New) The optical pickup apparatus of claim 137, wherein the ring-shaped diffractive portion includes a first diffractive pattern and a second diffractive pattern, the second diffractive pattern being located distant from the optical axis more than the first diffractive pattern.

153. (New) The optical pickup apparatus of claim 137, wherein the objective lens includes a first objective element and a second objective element, and the ring-shaped diffractive structure is provided on at least an optical surface of the first optical element and a second optical element.

154. (New) The optical pickup apparatus of claim 148, wherein the first light flux having the first wavelength is a blue laser beam.

155. (New) The optical pickup apparatus of claim 154, wherein the second optical information recording medium is a next-generation high density optical disk of which information is recorded on and/or reproduced from with the blue laser beam.

156. (New) The optical pickup apparatus of claim 148, wherein the thickness of the transparent substrate of the first optical information recording medium is equal to that of the second information recording medium.

157. (New) The optical pickup apparatus of claim 148, wherein when NA2 is an image side numerical aperture of the objective lens necessary for recording and/or reproducing information for the first optical information medium, NA1 is an image side numerical aperture of the objective lens necessary for recording and/or reproducing

information for the second optical information lens necessary for recording and/or reproducing information for the third optical information medium, and NA1 and NA2 are larger than NA3.

158. (New) The optical pickup apparatus of 157, wherein NA1 is equal to NA2.

159. (New) The optical pickup apparatus of claim 157, wherein when recording and/or reproducing information is conducted for the third optical information recording medium, a spherical aberration of a light flux having passed through a region of the objective lens having a numerical aperture larger than NA3 is flare on the third optical information recording medium.

160. (New) The optical pickup apparatus of claim 148, wherein the objective lens comprises a ring-shaped diffractive portion.

161. (New) The optical pickup apparatus of claim 160, wherein the objective lens comprises an aspherical refractive surface.